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/ THIS PROGRAM SOURCE FILE IS SUPPLIED IN CONFIDENCE TO THE
/ CUSTOMER; THE CONTENTS OR DETAILS OF ITS OPERATION MAY ONLY
/ BE DISCLOSED TO PERSONS EMPLOYED BY THE CUSTOMER WHO
/ REQUIRE A KNOWLEDGE OF THE SOFTWARE CODING TO CARRY OUT
/ THEIR JOB. DISCLOSURE TO ANY OTHER PERSON MUST HAVE PRIOR
/ AUTHORIZATION FROM THE DIRECTORS OF REDAC SOFTWARE LIMITED
/
/1 SUITE : P.C.B. LAYOUT
/2 PROGRAM TITLE : REDAL23 MARK2
/3 ROUTINE TITLE :
/
/4 AUTHOR :
/5 DATE :
/
/6 PURPOSE :
/
/7 CALLING SEQUENCE AND DESCRIPTION OF ARGUMENTS :
/8 I/O DEVICES AND FUNCTIONS :
/9 REGISTERS USED :
/10 EXTERNAL COMMON AREAS :
/11 INTERNAL COMMON AREAS :
/12 EXTERNAL GLOBALS :
/13 INTERNAL GLOBALS :
/14 CONDITIONAL ASSEMBLY PARAMETERS :
/15 METHOD :
/16 AMENDMENTS :
/
/SUBROUTINE USED TO SET INITIAL ASSIGNMENTS (MODE SET NEGATIVE)
/ AND TO CHANGE ASSIGNMENTS. ALSO SETS STATUS BITS FOR ALL ROUTES
/ TO 1 (INVALID) IF NEW ASSIGNMENTS REQUIRE THIS
/ EDITED FOR REDAL 14 BY LINDA
/ GLOBL ASSET.DA
ROUTE .CBD ROUTE 1
EORAD .CBD EORTAD 1
TRKD .CBD TRAKAD 1
PADS .CBD PADAD 1

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00000 R 000000 A
00001 R 000000 A
00002 R 000000 A
00003 R 000000 A

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| PAGE | 2     | ASSET    | SRC  |
|------|-------|----------|--|
| 53   | 00004 | R 000000 | A DRILL .CBD DRILAD 1  |
| 54   | 00005 | R 000000 | A SIZE .CBD SIZE 1   |
| 55   | 00006 | R 000000 | A NOSLAY .CBD LAYER 1  |
| 56   | 00007 | R 000000 | A ASSET 0  |
| 57   | 00010 | R 121576 | E JMS* .DA /GET ARGS   |
| 58   | 00011 | R 600017 | R JMP .+1+5  |
| 59   | 00012 | R 000000 | A CODE 0 /CHARACTER CODE                                     |
| 60   | 00013 | R 000000 | A WSID1 0 /PAD DIAM OR TRACK WIDTH                           |
| 61   | 00014 | R 000000 | A WSID2 0 /DRILL DIAM  |
| 62   | 00015 | R 000000 | A MODE 0 / NEGATIVE FOR SET UP, 0 TRACK ASSIGN, 1 PAD ASSIGN |
| 63   | 00016 | R 000000 | A LAYER 0 / LAYER NO.  |
| 64   | 00017 | R 200005 | R LAC SIZE   |
| 65   | 00020 | R 723007 | A AAC 7  |
| 66   | 00021 | R 041572 | R DAC STRK# /TRACK SIZE                                      |
| 67   | 00022 | R 723001 | A AAC 1  |
| 68   | 00023 | R 041566 | R DAC SPAD# /PAD SIZE  |
| 69   | 00024 | R 723001 | A AAC 1  |
| 70   | 00025 | R 041564 | R DAC SDRL# /DRILL SIZE                                      |
| 71   | 00026 | R 220000 | R LAC* ROUTE   |
| 72   | 00027 | R 041556 | R DAC ROUTAD#  |
| 73   | 00030 | R 141551 | R DZM INVAL# /SET IF ROUTES ARE TO BE SET INVALID            |
| 74   | 00031 | R 220015 | R LAC* MODE  |
| 75   | 00032 | R 740100 | A SMA /SET UP CALL TO COPY ASSIGNMENTS TO ARRAYS IN COMMON   |
| 76   | 00033 | R 600050 | R JMP NOSET  |
| 77   | 00034 | R 201577 | R LAC (TRK-1   |
| 78   | 00035 | R 061600 | R DAC* (10   |
| 79   | 00036 | R 100352 | R JMS COPY   |
| 80   | 00037 | R 200002 | R LAC TRKD   |
| 81   | 00040 | R 221572 | R LAC* STRK  |
| 82   | 00041 | R 100352 | R JMS COPY   |
| 83   | 00042 | R 200003 | R LAC PADS   |
| 84   | 00043 | R 221566 | R LAC* SPAD  |
| 85   | 00044 | R 100352 | R JMS COPY   |
| 86   | 00045 | R 200004 | R LAC DRILL  |
| 87   | 00046 | R 221564 | R LAC* SDRL  |
| 88   | 00047 | R 620007 | R JMP* ASSET /EXIT AFTER SETUP                               |
| 89   | 00050 | R 740200 | A NOSET SZA /TRACK ASSIGNMENT                                |
| 90   | 00051 | R 600151 | R JMP PADAS /PAD ASSIGNMENT                                  |
| 91   | 00052 | R 200556 | R LAC NUMBT /REASSIGN TRACK                                  |
| 92   | 00053 | R 041553 | R DAC NUMB   |
| 93   |       |          | /  |
| 94   |       |          | /  |
| 95   | 00054 | R 200002 | R LAC TRKD   |
| 96   | 00055 | R 041540 | R TRAKA DAC ARAD# /ARRAY ADDRESS                             |
| 97   | 00056 | R 360012 | R TAD* CODE  |
| 98   | 00057 | R 040371 | R DAC ADDR /ADDRESS FOR TRACK REASSIGNMENT                   |
| 99   | 00060 | R 041545 | R DAC DFLT#  |
| 100  | 00061 | R 220016 | R LAC* LAYER / ASSIGN ALL LAYERS                             |
| 101  | 00062 | R 741200 | A SNA  |
| 102  | 00063 | R 600155 | R JMP ALLAY / REASSIGN ALL LAYERS                            |
| 103  | 00064 | R 740031 | A TCA  |
| 104  | 00065 | R 360006 | R TAD* NOSLAY / IS LAYER NO LEGAL ?                          |

| PAGE | 3 | ASSET            | SRC   |
|------|---|------------------|---|
| 105  |   | 00066 R 741100 A | SPA   |
| 106  |   | 00067 R 600347 R | JMP ERRA / NO, PRINT ERROR MESSAGE                |
| 107  |   | 00070 R 220371 R | LAC* ADDR /OLD TRACK WIDTH                        |
| 108  |   | 00071 R 501601 R | AND (???  |
| 109  |   | 00072 R 560013 R | SAD* WSID1 /REASSIGN TO STANDARD WIDTH?           |
| 110  |   | 00073 R 600217 R | JMP STAND /YES                                    |
| 111  |   |                  | /FIND LAST ASSIGNMENT IN CHAIN                    |
| 112  |   |                  | /   |
| 113  |   | 00074 R 220371 R | TRKLUP LAC* ADDR                                  |
| 114  |   | 00075 R 640515 A | LRS 15  |
| 115  |   | 00076 R 501602 R | AND (37 /ANOTHER POINTER?                         |
| 116  |   | 00077 R 740200 A | SZA   |
| 117  |   | 00100 R 600104 R | JMP TSTMOR / YES                                  |
| 118  |   | 00101 R 200371 R | LAC ADDR / NO                                     |
| 119  |   | 00102 R 041570 R | DAC STORPT# / HOLDS ADDRESS OF LAST WORD IN CHAIN |
| 120  |   | 00103 R 600107 R | JMP ADDTRK / ADD WIDTH TO ARRAY                   |
| 121  |   | 00104 R 341540 R | TSTMOR TAD ARAD                                   |
| 122  |   | 00105 R 341553 R | TAD NUMB  |
| 123  |   | 00106 R 600263 R | JMP TEST / TEST FOR END CHAIN                     |
| 124  |   |                  | /   |
| 125  |   |                  | / ADD ASSIGNMENT TO ARRAY                         |
| 126  |   |                  | /   |
| 127  |   | 00107 R 221545 R | ADDTRK LAC* DFLT                                  |
| 128  |   | 00110 R 501601 R | AND (???  |
| 129  |   | 00111 R 360013 R | TAD* WSID1 /TEST FOR NEW ASSIGNMENT > DEFAULT     |
| 130  |   | 00112 R 740300 A | SMA!SZA   |
| 131  |   | 00113 R 441551 R | ISZ INVAL   |
| 132  |   | 00114 R 201553 R | LAC NUMB#   |
| 133  |   | 00115 R 341540 R | TAD ARAD /SET UP POINTER TO START OF              |
| 134  |   | 00116 R 040371 R | DAC ADDR /ADDITIONAL ASSIGNMENTS                  |
| 135  |   |                  | /   |
| 136  |   |                  | / SCAN ARRAY FOR FREE WORD                        |
| 137  |   |                  | /   |
| 138  |   | 00117 R 440371 R | SCAN ISZ ADDR                                     |
| 139  |   | 00120 R 200371 R | LAC ADDR  |
| 140  |   | 00121 R 740031 A | TCA   |
| 141  |   | 00122 R 341553 R | TAD NUMB  |
| 142  |   | 00123 R 341553 R | TAD NUMB  |
| 143  |   | 00124 R 341540 R | TAD ARAD  |
| 144  |   | 00125 R 723002 A | AAC 2   |
| 145  |   | 00126 R 741200 A | SNA   |
| 146  |   | 00127 R 600345 R | JMP ERRB / ASSIGNMENT TABLE OVERFLOW              |
| 147  |   | 00130 R 220371 R | LAC* ADDR   |
| 148  |   | 00131 R 740200 A | SZA   |
| 149  |   | 00132 R 600117 R | JMP SCAN / NOT A FREE WORD                        |
| 150  |   | 00133 R 220016 R | LAC* LAYER / YES                                  |
| 151  |   | 00134 R 640611 A | LLS 11  |
| 152  |   | 00135 R 501603 R | AND (17000  |
| 153  |   | 00136 R 360013 R | TAD* WSID1 / ADD IN WIDTH TO WORD                 |
| 154  |   | 00137 R 060371 R | DAC* ADDR   |
| 155  |   | 00140 R 201540 R | LAC ARAD  |
| 156  |   | 00141 R 341553 R | TAD NUMB# / USED TO HOLD NO OF WORDS              |

| PAGE | 4 | ASSET   | SRC      |  |
|------|---|---------|----------|--|
| 157  |   | 00142 R | 740031 A | TCA  |
| 158  |   | 00143 R | 340371 R | TAD ADDR / SEPARATE REL PTR TO BE STORED IN LAST ENTRY |
| 159  |   | 00144 R | 640615 A | LLS 15   |
| 160  |   | 00145 R | 501604 R | AND (760000  |
| 161  |   | 00146 R | 361570 R | TAD* STORPT  |
| 162  |   | 00147 R | 061570 R | DAC* STORPT / STORE PTR IN LAST ENTRY                  |
| 163  |   | 00150 R | 600304 R | JMP EXIT   |
| 164  |   |         |          | /  |
| 165  |   |         |          | / PADS ARRAY ASSIGNMENT                                |
| 166  |   |         |          | /  |
| 167  |   | 00151 R | 200557 R | PADAS LAC NUMBP  |
| 168  |   | 00152 R | 041553 R | DAC NUMB   |
| 169  |   | 00153 R | 200003 R | LAC PADS   |
| 170  |   | 00154 R | 600055 R | JMP TRAKA  |
| 171  |   |         |          | /  |
| 172  |   |         |          | /  |
| 173  |   |         |          | /ALL LAYERS TO BE REASSIGNED                           |
| 174  |   |         |          | /  |
| 175  |   | 00155 R | 220015 R | ALLAY LAC* MODE  |
| 176  |   | 00156 R | 740200 A | SZA  |
| 177  |   | 00157 R | 600211 R | JMP CHADRL /CHANGE DRILL FOR PAD REASSIGNMENT          |
| 178  |   | 00160 R | 200371 R | ALAYS LAC ADDR   |
| 179  |   | 00161 R | 041571 R | DAC STPAD  |
| 180  |   | 00162 R | 220371 R | NXTONE LAC* ADDR                                       |
| 181  |   | 00163 R | 501601 R | AND (777   |
| 182  |   | 00164 R | 740031 A | TCA  |
| 183  |   | 00165 R | 360013 R | TAD* WSID1 /NEW ASSIGNMENT - OLD                       |
| 184  |   | 00166 R | 740300 A | SMA!SZA  |
| 185  |   | 00167 R | 441551 R | ISZ INVAL /SET ROUTES INVALID                          |
| 186  |   | 00170 R | 220371 R | LAC* ADDR  |
| 187  |   | 00171 R | 640515 A | LRS 15   |
| 188  |   | 00172 R | 501602 R | AND (37  |
| 189  |   | 00173 R | 041570 R | DAC STORPT /SAVE PTR TO NEXT ENTRY                     |
| 190  |   | 00174 R | 750000 A | CLA  |
| 191  |   | 00175 R | 060371 R | DAC* ADDR  |
| 192  |   | 00176 R | 201570 R | LAC STORPT   |
| 193  |   | 00177 R | 741200 A | SNA  |
| 194  |   | 00200 R | 600206 R | JMP FINISH /LAST ENTRY IN CHAIN                        |
| 195  |   | 00201 R | 201553 R | LAC NUMB   |
| 196  |   | 00202 R | 341540 R | TAD ARAD   |
| 197  |   | 00203 R | 341570 R | TAD STORPT /PTR TO NEXT ENTRY                          |
| 198  |   | 00204 R | 040371 R | DAC ADDR   |
| 199  |   | 00205 R | 600162 R | JMP NXTONE   |
| 200  |   | 00206 R | 220013 R | FINISH LAC* WSID1                                      |
| 201  |   | 00207 R | 061571 R | DAC* STPAD   |
| 202  |   | 00210 R | 600304 R | JMP EXIT   |
| 203  |   |         |          | /  |
| 204  |   | 00211 R | 200004 R | CHADRL LAC DRILL                                       |
| 205  |   | 00212 R | 360012 R | TAD* CODE /REASSIGN STANDARD                           |
| 206  |   | 00213 R | 041546 R | DAC DPTR#  |
| 207  |   | 00214 R | 220014 R | LAC* WSID2   |
| 208  |   | 00215 R | 061546 R | DAC* DPTR  |

| PAGE | 5 | ASSET            | SRC   |
|------|---|------------------|---|
| 209  |   | 00216 R 600160 R | JMP ALAYS   |
| 210  |   |                  | /   |
| 211  |   |                  | / REASSIGN BACK TO STANDARD FOR PARTICULAR LAYER            |
| 212  |   |                  | /   |
| 213  |   | 00217 R 200371 R | STAND LAC ADDR /POINTS TO DEFAULT ENTRY                     |
| 214  |   | 00220 R 041571 R | DAC STPAD#  |
| 215  |   | 00221 R 220371 R | LAC* ADDR   |
| 216  |   | 00222 R 640515 A | LRS 15  |
| 217  |   | 00223 R 501602 R | AND (37 /UNPACK PTR TO FURTHER ENTRIES                      |
| 218  |   | 00224 R 741200 A | SNA   |
| 219  |   | 00225 R 600304 R | JMP EXIT / ALREADY STANDARD ASSIGNMENT (NO FURTHER ENTRIES) |
| 220  |   | 00226 R 341540 R | TAD ARAD  |
| 221  |   | 00227 R 341553 R | TAD NUMB  |
| 222  |   | 00230 R 040371 R | DAC ADDR  |
| 223  |   | 00231 R 220371 R | LAC* ADDR /GET NEXT ENTRY IN CHAIN                          |
| 224  |   | 00232 R 640511 A | LRS 11  |
| 225  |   | 00233 R 501605 R | AND (17   |
| 226  |   | 00234 R 741200 A | SNA   |
| 227  |   | 00235 R 600304 R | JMP EXIT /END OF CHAIN, LAYER NOT FOUND                     |
| 228  |   | 00236 R 560016 R | SAD* LAYER / IS IT CORRECT LAYER ?                          |
| 229  |   | 00237 R 741000 A | SKP / YES   |
| 230  |   | 00240 R 600217 R | JMP STAND /NO,CONTINUE TO NEXT ENTRY IN CHAIN               |
| 231  |   | 00241 R 220371 R | LAC* ADDR   |
| 232  |   | 00242 R 501601 R | AND (777  |
| 233  |   | 00243 R 740031 A | TCA   |
| 234  |   | 00244 R 360013 R | TAD* WSID1 /NEW ASSSIGNMENT - OLD                           |
| 235  |   | 00245 R 740300 A | SMA!SZA   |
| 236  |   | 00246 R 441551 R | ISZ INVAL /SET ROUTES INVALID                               |
| 237  |   | 00247 R 220371 R | LAC* ADDR /IF NEW ASSIGNMENT > OLD                          |
| 238  |   | 00250 R 501604 R | AND (760000   |
| 239  |   | 00251 R 741200 A | SNA   |
| 240  |   | 00252 R 600260 R | JMP DELETE / NO FURTHER ENTRIES                             |
| 241  |   | 00253 R 041561 R | DAC SAVPTR# / HOLDS PTR TO BE PUT IN LAST ENTRY             |
| 242  |   | 00254 R 221571 R | LAC* STPAD  |
| 243  |   | 00255 R 501606 R | AND (17777  |
| 244  |   | 00256 R 341561 R | TAD SAVPTR  |
| 245  |   | 00257 R 741000 A | SKP   |
| 246  |   | 00260 R 750000 A | DELETE CLA  |
| 247  |   | 00261 R 061571 R | DAC* STPAD  |
| 248  |   | 00262 R 600304 R | JMP EXIT  |
| 249  |   | 00263 R 040371 R | TEST DAC ADDR   |
| 250  |   | 00264 R 220371 R | LAC* ADDR   |
| 251  |   | 00265 R 640511 A | LRS 11  |
| 252  |   | 00266 R 501605 R | AND (17   |
| 253  |   | 00267 R 560016 R | SAD* LAYER  |
| 254  |   | 00270 R 741000 A | SKP   |
| 255  |   | 00271 R 600074 R | JMP TRKLUP  |
| 256  |   | 00272 R 220371 R | LAC* ADDR /LAYER REASSIGNED ALL READY                       |
| 257  |   | 00273 R 501601 R | AND (777  |
| 258  |   | 00274 R 740031 A | TCA   |
| 259  |   | 00275 R 360013 R | TAD* WSID1 /NEW ASSSIGNMENT - OLD                           |
| 260  |   | 00276 R 740300 A | SMA!SZA   |

| PAGE | 6     | ASSET | SRC    |  |
|------|-------|-------|--------|--|
| 261  | 00277 | R     | 441551 | R ISZ INVAL /SET ROUTES INVALID IF NEW ASSIGNMENT > OLD      |
| 262  | 00300 | R     | 220371 | R LAC* ADDR  |
| 263  | 00301 | R     | 501607 | R AND (777000  |
| 264  | 00302 | R     | 360013 | R TAD* WSID1   |
| 265  | 00303 | R     | 060371 | R DAC* ADDR  |
| 266  | 00304 | R     | 220012 | R EXIT LAC* CODE   |
| 267  | 00305 | R     | 740200 | A SZA  |
| 268  | 00306 | R     | 600312 | R JMP .+4  |
| 269  | 00307 | R     | 560015 | R SAD* MODE  |
| 270  | 00310 | R     | 141551 | R DZM INVAL  |
| 271  | 00311 | R     | 600316 | R JMP .+5  |
| 272  | 00312 | R     | 740031 | A TCA  |
| 273  | 00313 | R     | 341610 | R TAD (21  |
| 274  | 00314 | R     | 741100 | A SPA  |
| 275  | 00315 | R     | 141551 | R DZM INVAL  |
| 276  | 00316 | R     | 201551 | R LAC INVAL  |
| 277  | 00317 | R     | 741200 | A SNA  |
| 278  | 00320 | R     | 620007 | R JMP* ASSET   |
| 279  | 00321 | R     | 201556 | R SETST LAC ROUTAD /SET ALL ROUTES INVALID ON CHANGING SPACE |
| 280  | 00322 | R     | 041557 | R DAC RTPT# /SCANNING POINTER                                |
| 281  | 00323 | R     | 723777 | A AAC -1   |
| 282  | 00324 | R     | 360001 | R TAD* EORAD   |
| 283  | 00325 | R     | 041547 | R DAC ENDRT# /POINTER TO END OF ROUTES                       |
| 284  | 00326 | R     | 750000 | A CLA  |
| 285  | 00327 | R     | 341557 | R ROOTLP TAD RTPT /STEP TO START OF NEXT ROOT                |
| 286  | 00330 | R     | 541547 | R SAD ENDRT  |
| 287  | 00331 | R     | 620007 | R JMP* ASSET /ALLROOTS DONE                                  |
| 288  | 00332 | R     | 041557 | R DAC RTPT /TO FIRST WORD OF ROUTE                           |
| 289  | 00333 | R     | 721000 | A PAX  |
| 290  | 00334 | R     | 230372 | R LAC* ZERO,X  |
| 291  | 00335 | R     | 501611 | R AND (377777  |
| 292  | 00336 | R     | 341612 | R TAD (400000  |
| 293  | 00337 | R     | 070372 | R DAC* ZERO,X /STATUS BIT SET TO 1 (INVALID)                 |
| 294  | 00340 | R     | 441557 | R ISZ RTPT /TO SECOND WORD OF ROUTE                          |
| 295  | 00341 | R     | 230373 | R LAC* ONE,X   |
| 296  | 00342 | R     | 660512 | A LRSS 12  |
| 297  | 00343 | R     | 723777 | A AAC -1 /NO. OF WORDS - 1                                   |
| 298  | 00344 | R     | 600327 | R JMP ROOTLP   |
| 299  | 00345 | R     | 201613 | R ERRB LAC (4  |
| 300  | 00346 | R     | 741000 | A SKP  |
| 301  | 00347 | R     | 201614 | R ERRA LAC (3  |
| 302  | 00350 | R     | 060015 | R DAC* MODE  |
| 303  | 00351 | R     | 620007 | R JMP* ASSET   |
| 304  |       |       |        | /  |
| 305  |       |       |        | /  |
| 306  | 00352 | R     | 740040 | A COPY XX  |
| 307  | 00353 | R     | 420352 | R XCT* COPY  |
| 308  | 00354 | R     | 723777 | A AAC -1   |
| 309  | 00355 | R     | 061615 | R DAC* (11   |
| 310  | 00356 | R     | 440352 | R ISZ COPY   |
| 311  | 00357 | R     | 420352 | R XCT* COPY  |
| 312  | 00360 | R     | 740031 | A TCA  |

| PAGE | 7     | ASSET    | SRC   |
|------|-------|----------|---|
| 313  | 00361 | R 040370 | R DAC CNTR                                  |
| 314  | 00362 | R 220010 | A LOOP LAC* 10                              |
| 315  | 00363 | R 060011 | A DAC* 11                                   |
| 316  | 00364 | R 440370 | R ISZ CNTR                                  |
| 317  | 00365 | R 600362 | R JMP LOOP                                  |
| 318  | 00366 | R 440352 | R ISZ COPY                                  |
| 319  | 00367 | R 620352 | R JMP* COPY                                 |
| 320  | 00370 | R 000000 | A CNTR 0 /COUNTER FOR COPY LOOP             |
| 321  | 00371 | R 000000 | A ADDR 0 /ADDRESS FOR CHANGES               |
| 322  | 00372 | R 000000 | A ZERO 0                                    |
| 323  | 00373 | R 000001 | A ONE 1                                     |
| 324  |       |          | .DEC  |
| 325  |       |          | /STANDARD ASSIGNMENTS FOR TRACK WIDTHS ETC. |
| 326  | 00374 | R 000062 | A TRK 50 /COPPER SPOT DIAM                  |
| 327  | 00375 | R 000014 | A 12 /TYPE 1 TRACK WIDTH                    |
| 328  | 00376 | R 000024 | A 20 /TYPE 2                                |
| 329  | 00377 | R 000031 | A 25 /TYPE 3                                |
| 330  | 00400 | R 000062 | A 50 /TYPE 4                                |
| 331  | 00401 | R 000113 | A 75 /TYPE 5                                |
| 332  | 00402 | R 000144 | A 100 /TYPE 6                               |
| 333  | 00403 | R 000226 | A 150 /TYPE 7                               |
| 334  | 00404 | R 000030 | A 24 /SPACE*2                               |
| 335  | 00405 | R 000000 | A 0 / SPARE WORDS FOR                       |
| 336  | 00406 | R 000000 | A 0 / REASSIGNMENTS                         |
| 337  | 00407 | R 000000 | A 0 / ON OTHER LAYERS                       |
| 338  | 00410 | R 000000 | A 0   |
| 339  | 00411 | R 000000 | A 0   |
| 340  | 00412 | R 000000 | A 0   |
| 341  | 00413 | R 000000 | A 0   |
| 342  | 00414 | R 000000 | A 0   |
| 343  | 00415 | R 000000 | A 0   |
| 344  | 00416 | R 000062 | A PDS 50 / TYPE 0 PLATED THROUGH HOLE       |
| 345  | 00417 | R 000050 | A 40 /TYPE 1                                |
| 346  | 00420 | R 000062 | A 50 / TYPE 2                               |
| 347  | 00421 | R 000061 | A 49 / TYPE 3                               |
| 348  | 00422 | R 000060 | A 48 / TYPE 4                               |
| 349  | 00423 | R 000113 | A 75 / TYPE 5                               |
| 350  | 00424 | R 000112 | A 74 / TYPE 6                               |
| 351  | 00425 | R 000111 | A 73 / TYPE 7                               |
| 352  | 00426 | R 000120 | A 80 / TYPE 8                               |
| 353  | 00427 | R 000144 | A 100 / TYPE 9                              |
| 354  | 00430 | R 000143 | A 99 / TYPE 10                              |
| 355  | 00431 | R 000142 | A 98 / TYPE 11                              |
| 356  | 00432 | R 000175 | A 125 / TYPE 12                             |
| 357  | 00433 | R 000174 | A 124 / TYPE 13                             |
| 358  | 00434 | R 000173 | A 123 / TYPE 14                             |
| 359  | 00435 | R 000226 | A 150 / TYPE 15                             |
| 360  | 00436 | R 000225 | A 149 / TYPE 16                             |
| 361  | 00437 | R 000224 | A 148 / TYPE 17                             |
| 362  | 00440 | R 000074 | A 60 / TYPE 18                              |
| 363  | 00441 | R 000073 | A 59 / TYPE 19                              |
| 364  | 00442 | R 000072 | A 58 / TYPE 20                              |

| PAGE | 8     | ASSET | SRC    |                               |
|------|-------|-------|--------|-------------------------------|
| 365  | 00443 | R     | 000310 | A 200 / TYPE 21               |
| 366  | 00444 | R     | 000062 | A 50 / TYPE 22                |
| 367  | 00445 | R     | 000076 | A 62 / TYPE 23                |
| 368  | 00446 | R     | 000076 | A 62 / TYPE 24                |
| 369  | 00447 | R     | 000113 | A 75 / TYPE 25                |
| 370  | 00450 | R     | 000113 | A 75 / TYPE 26                |
| 371  | 00451 | R     | 000144 | A 100 / TYPE 27               |
| 372  | 00452 | R     | 000144 | A 100 / TYPE 28               |
| 373  | 00453 | R     | 000024 | A 20 / TYPE 29                |
| 374  | 00454 | R     | 000024 | A 20 / TYPE 30                |
| 375  | 00455 | R     | 000076 | A 62 / TYPE 31 EDGE CONNECTOR |
| 376  | 00456 | R     | 000000 | A 0 / SPARE WORDS             |
| 377  | 00457 | R     | 000000 | A 0 / FOR                     |
| 378  | 00460 | R     | 000000 | A 0 / REASSIGNMENTS           |
| 379  | 00461 | R     | 000000 | A 0 / ON                      |
| 380  | 00462 | R     | 000000 | A 0 / OTHER                   |
| 381  | 00463 | R     | 000000 | A 0 / LAYERS                  |
| 382  | 00464 | R     | 000000 | A 0 / PACKED                  |
| 383  | 00465 | R     | 000000 | A 0 / 5:4:9                   |
| 384  | 00466 | R     | 000000 | A 0 / 5 BITS HOLD PTR         |
| 385  | 00467 | R     | 000000 | A 0 / TO NEXT                 |
| 386  | 00470 | R     | 000000 | A 0 / WORD IN                 |
| 387  | 00471 | R     | 000000 | A 0 / CHAIN                   |
| 388  | 00472 | R     | 000000 | A 0 / 4 BITS HOLD             |
| 389  | 00473 | R     | 000000 | A 0 / REASSIGNED              |
| 390  | 00474 | R     | 000000 | A 0 / LAYER NO                |
| 391  | 00475 | R     | 000000 | A 0 / 9 BITS HOLD             |
| 392  | 00476 | R     | 000000 | A 0 / WIDTH                   |
| 393  | 00477 | R     | 000000 | A 0                           |
| 394  | 00500 | R     | 000000 | A 0                           |
| 395  | 00501 | R     | 000000 | A 0                           |
| 396  | 00502 | R     | 000000 | A 0                           |
| 397  | 00503 | R     | 000000 | A 0                           |
| 398  | 00504 | R     | 000000 | A 0                           |
| 399  | 00505 | R     | 000000 | A 0                           |
| 400  | 00506 | R     | 000000 | A 0                           |
| 401  | 00507 | R     | 000000 | A 0                           |
| 402  | 00510 | R     | 000000 | A 0                           |
| 403  | 00511 | R     | 000000 | A 0                           |
| 404  | 00512 | R     | 000000 | A 0                           |
| 405  | 00513 | R     | 000000 | A 0                           |
| 406  | 00514 | R     | 000000 | A 0                           |
| 407  | 00515 | R     | 000000 | A 0                           |
| 408  | 00516 | R     | 000034 | A DRL 28 / TYPE 0             |
| 409  | 00517 | R     | 000034 | A 28 / TYPE 1 DRILL SIZE      |
| 410  | 00520 | R     | 000034 | A 28 / TYPE 2                 |
| 411  | 00521 | R     | 000034 | A 28 / TYPE 3                 |
| 412  | 00522 | R     | 000034 | A 28 / TYPE 4                 |
| 413  | 00523 | R     | 000034 | A 28 / TYPE 5                 |
| 414  | 00524 | R     | 000034 | A 28 / TYPE 6                 |
| 415  | 00525 | R     | 000034 | A 28 / TYPE 7                 |
| 416  | 00526 | R     | 000034 | A 28 / TYPE 8                 |



| PAGE | 9 | ASSET            | SRC                       |
|------|---|------------------|---------------------------|
| 417  |   | 00527 R 000040 A | 32 TYPE 9                 |
| 418  |   | 00530 R 000040 A | 32 / TYPE 10              |
| 419  |   | 00531 R 000040 A | 32 / TYPE 11              |
| 420  |   | 00532 R 000040 A | 32 / TYPE 12              |
| 421  |   | 00533 R 000040 A | 32 / TYPE 13              |
| 422  |   | 00534 R 000040 A | 32 / TYPE 14              |
| 423  |   | 00535 R 000050 A | 40 / TYPE 15              |
| 424  |   | 00536 R 000050 A | 40 / TYPE 16              |
| 425  |   | 00537 R 000050 A | 40 / TYPE 17              |
| 426  |   | 00540 R 000034 A | 28 / TYPE 18              |
| 427  |   | 00541 R 000034 A | 28 / TYPE 19              |
| 428  |   | 00542 R 000034 A | 28 / TYPE 20              |
| 429  |   | 00543 R 000050 A | 40 / TYPE 21              |
| 430  |   | 00544 R 000702 A | 450 / TYPE 22             |
| 431  |   | 00545 R 000674 A | 444 / TYPE 23             |
| 432  |   | 00546 R 001266 A | 694 / TYPE 24             |
| 433  |   | 00547 R 000651 A | 425 / TYPE 25             |
| 434  |   | 00550 R 001243 A | 675 / TYPE 26             |
| 435  |   | 00551 R 000620 A | 400 / TYPE 27             |
| 436  |   | 00552 R 001212 A | 650 / TYPE 28             |
| 437  |   | 00553 R 000740 A | 480 / TYPE 29             |
| 438  |   | 00554 R 001332 A | 730 / TYPE 30             |
| 439  |   | 00555 R 000415 A | 269 / TYPE 31             |
| 440  |   |                  | /                         |
| 441  |   |                  | / ARRAY SIZES             |
| 442  |   |                  | /                         |
| 443  |   | 00556 R 000010 A | NUMBT 8 /HALF TRACKS -1   |
| 444  |   | 00557 R 000037 A | NUMBP 31 /HALF PADS -1    |
| 445  |   |                  | .OCT                      |
| 446  |   |                  | /END OF ASSIGNMENT TABLES |

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447 .TITLE LIST
448 .GLOBL LIST,DATAD
449 00560 R 000000 A TRKAD .CBD TRAKAD 1
450 00561 R 000000 A PADAD .CBD PADAD 1
451 00562 R 000000 A DRILAD .CBD DRILAD 1
452 00563 R 740040 A LIST XX
453 00564 R 221575 E LAC* DATAD
454 00565 R 723004 A AAC 4
455 00566 R 041543 R DAC DAT#
456 .IFZER SLOT-4 /IF LINE PRINTER OUTPUT REQUIRED
457 .GLOBL LPA.
458 LAC LPA.
459 DAC* DAT
460 .ENDC
461 .IFNZR SLOT-4 /NO LP
462 00567 R 723772 A AAC -6
463 00570 R 041544 R DAC DAT1#
464 00571 R 221544 R LAC* DAT1
465 00572 R 061543 R DAC* DAT
466 .ENDC
467 .INIT SLOT,1,0
      00573 R 001775 A *G CAL+1*1000 SLOT&777
      00574 R 000001 A *G 1
      00575 R 000000 A *G 0+0
      00576 R 000000 A *G 0
468 /
469 / WRITE HEADINGS
470 /
471 .WRITE SLOT,2,MESS1,34
      00577 R 002775 A *G CAL+2*1000 SLOT&777
      00600 R 000011 A *G 11
      00601 R 001260 R *G MESS1
      *G .DEC
      00602 R 777736 A *G -34
472 .WAIT SLOT
      00603 R 000775 A *G CAL SLOT&777
      00604 R 000012 A *G 12
473 .WRITE SLOT,2,MESS7B,34
      00605 R 002775 A *G CAL+2*1000 SLOT&777
      00606 R 000011 A *G 11
      00607 R 001464 R *G MESS7B
      *G .DEC
      00610 R 777736 A *G -34
474 .WAIT SLOT
      00611 R 000775 A *G CAL SLOT&777
      00612 R 000012 A *G 12
475 /
476 / COPPER SPOT SIZE
477 00613 R 141567 R DZM SPFLG# /INDICATES SPACE
478 /
479 .WRITE SLOT,2,MESS2,34
      00614 R 002775 A *G CAL+2*1000 SLOT&777

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| PAGE | 11 | ASSET | SRC           | LIST  |
|------|----|-------|---------------|---|
|      |    | 00615 | R 000011 A *G | 11  |
|      |    | 00616 | R 001272 R *G | MESS2   |
|      |    |       | *G            | .DEC  |
| 480  |    | 00617 | R 777736 A *G | -34   |
|      |    |       | .WAIT         | SLOT  |
|      |    | 00620 | R 000775 A *G | CAL SLOT&777  |
|      |    | 00621 | R 000012 A *G | 12  |
| 481  |    |       | .WRITE        | SLOT,2,MESS2A,34                                    |
|      |    | 00622 | R 002775 A *G | CAL+2*1000 SLOT&777                                 |
|      |    | 00623 | R 000011 A *G | 11  |
|      |    | 00624 | R 001302 R *G | MESS2A  |
|      |    |       | *G            | .DEC  |
|      |    | 00625 | R 777736 A *G | -34   |
| 482  |    |       | .WAIT         | SLOT  |
|      |    | 00626 | R 000775 A *G | CAL SLOT&777  |
|      |    | 00627 | R 000012 A *G | 12  |
| 483  |    | 00630 | R 101102 R    | JMS BUFNIT /INITIALISE OUTPUT BUFFER                |
| 484  |    | 00631 | R 201470 R    | LAC MESBUF  |
| 485  |    | 00632 | R 723006 A    | AAC 6   |
| 486  |    | 00633 | R 041470 R    | DAC MESBUF  |
| 487  |    | 00634 | R 200560 R    | LAC TRKAD   |
| 488  |    | 00635 | R 041573 R    | DAC TEMP  |
| 489  |    | 00636 | R 101216 R    | JMS SPRATE  |
| 490  |    | 00637 | R 201574 R    | LAC WIDTH   |
| 491  |    | 00640 | R 101143 R    | JMS BUFFIL  |
| 492  |    | 00641 | R 101117 R    | JMS OUTPUT /OUTPUT 1ST LINE COPPER SPOT             |
| 493  |    | 00642 | R 200560 R    | LAC TRKAD   |
| 494  |    | 00643 | R 341600 R    | TAD (10   |
| 495  |    | 00644 | R 041565 R    | DAC SETAD /PTR TO LAST WORD OF STANDARD ASSIGNMENTS |
| 496  |    | 00645 | R 101237 R    | JMS SETWRT /OUTPUT OTHER LAYERS IF REQUIRED         |
| 497  |    |       | /             |   |
| 498  |    |       | /             | SPACE   |
| 499  |    |       | /             |   |
| 500  |    | 00646 | R 200560 R    | LAC TRKAD   |
| 501  |    | 00647 | R 723010 A    | AAC 10  |
| 502  |    | 00650 | R 041573 R    | DAC TEMP  |
| 503  |    | 00651 | R 201470 R    | LAC MESBUF  |
| 504  |    | 00652 | R 723006 A    | AAC 6   |
| 505  |    | 00653 | R 041470 R    | DAC MESBUF  |
| 506  |    |       | .WRITE        | SLOT,2,MESS3,34                                     |
|      |    | 00654 | R 002775 A *G | CAL+2*1000 SLOT&777                                 |
|      |    | 00655 | R 000011 A *G | 11  |
|      |    | 00656 | R 001314 R *G | MESS3   |
|      |    |       | *G            | .DEC  |
|      |    | 00657 | R 777736 A *G | -34   |
| 507  |    |       | .WAIT         | SLOT  |
|      |    | 00660 | R 000775 A *G | CAL SLOT&777  |
|      |    | 00661 | R 000012 A *G | 12  |
| 508  |    |       | .WRITE        | SLOT,2,MESS3A,34                                    |
|      |    | 00662 | R 002775 A *G | CAL+2*1000 SLOT&777                                 |
|      |    | 00663 | R 000011 A *G | 11  |
|      |    | 00664 | R 001322 R *G | MESS3A  |

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509      00665 R 777736 A *G      .DEC
      00666 R 000775 A *G      -34
      00667 R 000012 A *G      .WAIT SLOT
      00670 R 441567 R      CAL SLOT&777
      00671 R 101216 R      ISZ SPFLG /SET FLAG SPRATE
      00672 R 201574 R      JMS SPRATE
      00673 R 101143 R      LAC WIDTH
      00674 R 101117 R      JMS BUFFIL
      00675 R 101237 R      JMS OUTPUT
      00676 R 141567 R      JMS SETWRT
      517      DZM SPFLG /CLEAR SPACE FLAG
      518      /
      519      / PTHOLE
      520      /
      00677 R 002775 A *G      .WRITE SLOT,2,MESS4,34
      00700 R 000011 A *G      CAL+2*1000 SLOT&777
      00701 R 001336 R *G      11
      00702 R 777736 A *G      MESS4
      521      .DEC
      00703 R 000775 A *G      -34
      00704 R 000012 A *G      .WAIT SLOT
      522      CAL SLOT&777
      00705 R 002775 A *G      12
      00706 R 000011 A *G      .WRITE SLOT,2,MESS4A,34
      00707 R 001352 R *G      CAL+2*1000 SLOT&777
      00710 R 777736 A *G      11
      523      MESS4A
      00711 R 000775 A *G      .DEC
      00712 R 000012 A *G      -34
      00713 R 201470 R      .WAIT SLOT
      524      CAL SLOT&777
      525      12
      526      LAC MESBUF
      527      AAC 6
      528      DAC MESBUF
      529      LAC DRILAD
      530      AAC -1
      531      DAC* (11
      532      LAC PADAD
      533      DAC TEMP
      534      JMS SPRATE
      535      LAC WIDTH
      536      JMS BUFFIL /WIDTH
      537      LAC* 11
      538      JMS BUFFIL
      539      JMS OUTPUT
      540      LAC PADAD
      541      TAD (37
      542      DAC SETAD
      JMS SETWRT
      /

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543      / TRAKS
544      /
545      .WRITE SLOT,2,MESS5,34
          CAL+2*1000 SLOT&777
          11
          MESS5
          *G
          .DEC
          -34
546      .WAIT SLOT
          CAL SLOT&777
          12
547      .WRITE SLOT,2,MESS5A,34
          CAL+2*1000 SLOT&777
          11
          MESS5A
          *G
          .DEC
          -34
548      .WAIT SLOT
          CAL SLOT&777
          12
549      00751 R 777771 A    LAW -7
550      00752 R 041541 R    DAC COUNT#
551      00753 R 141554 R    DZM NUMBA#
552      00754 R 441554 R    LOOP1 ISZ NUMBA /UPDATE CODE NO.
553      00755 R 200560 R    LAC TRKAD /TRAKS ADDR
554      00756 R 341554 R    TAD NUMBA
555      00757 R 041573 R    DAC TEMP /PTR TO THIS CODE ENTRY
556      00760 R 441470 R    ISZ MESBUF /SPACE TO
557      00761 R 441470 R    ISZ MESBUF /CORRECT POSITION
558      00762 R 201554 R    LAC NUMBA
559      00763 R 101143 R    JMS BUFFIL /CODE
560      00764 R 441470 R    ISZ MESBUF /SPACE
561      00765 R 441470 R    ISZ MESBUF /AGAIN
562      00766 R 221573 R    LAC* TEMP
563      00767 R 101216 R    JMS SPRATE /GET PTR,WIDTH AND LAYER
564      00770 R 201574 R    LAC WIDTH
565      00771 R 101143 R    JMS BUFFIL /WIDTH
566      00772 R 101117 R    JMS OUTPUT
567      00773 R 200560 R    LAC TRKAD
568      00774 R 341600 R    TAD (10
569      00775 R 041565 R    DAC SETAD# /PTR TO LAST WORD OF STANDARD ASSIGNMENTS
570      00776 R 101237 R    JMS SETWRT /O/P NON STANDARD IF ANY
571      00777 R 441541 R    ISZ COUNT
572      01000 R 600754 R    JMP LOOP1
573      /
574      / PADS
575      /
576      .WRITE SLOT,2,MESS6,34
          CAL+2*1000 SLOT&777
          11
          MESS6
          *G
          .DEC

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577 01004 R 777736 A *G      -34
      .WAIT SLOT
01005 R 000775 A *G      CAL SLOT&777
01006 R 000012 A *G      12
578 01007 R 002775 A *G      .WRITE SLOT,2,MESS6A,34
      CAL+2*1000 SLOT&777
01010 R 000011 A *G      11
01011 R 001420 R *G      MESS6A
      *G      .DEC
01012 R 777736 A *G      -34
579 01013 R 000775 A *G      .WAIT SLOT
      CAL SLOT&777
01014 R 000012 A *G      12
580 01015 R 777753 A      LAW -25
581 01016 R 041541 R      DAC COUNT
582 01017 R 777777 A      LAW -1
583 01020 R 041542 R      DAC COUNT1#
584 01021 R 200562 R      LAC DRILAD
585 01022 R 061615 R      DAC* (11
586 01023 R 200561 R      LAC PADAD
587 01024 R 723001 A      AAC 1
588 01025 R 041573 R      DAC TEMP
589 01026 R 141554 R      DZM NUMBA
590 01027 R 441554 R      LOOP2 ISZ NUMBA
591 01030 R 441470 R      ISZ MESBUF
592 01031 R 441470 R      ISZ MESBUF
593 01032 R 201554 R      LAC NUMBA /CODE
594 01033 R 101143 R      JMS BUFFIL
595 01034 R 441470 R      ISZ MESBUF
596 01035 R 441470 R      ISZ MESBUF
597 01036 R 101216 R      JMS SPRATE
598 01037 R 201574 R      LAC WIDTH
599 01040 R 101143 R      JMS BUFFIL
600 01041 R 220011 A      LAC* 11
601 01042 R 101143 R      JMS BUFFIL
602 01043 R 101117 R      JMS OUTPUT
603 01044 R 200561 R      LAC PADAD
604 01045 R 341602 R      TAD (37
605 01046 R 041565 R      DAC SETAD
606 01047 R 101237 R      JMS SETWRT
607 01050 R 200561 R      LAC PADAD
608 01051 R 723001 A      AAC 1
609 01052 R 341554 R      TAD NUMBA
610 01053 R 041573 R      DAC TEMP
611 01054 R 441541 R      ISZ COUNT
612 01055 R 601027 R      JMP LOOP2
613 /
614 01056 R 441542 R      ISZ COUNT1
615 01057 R 601077 R      JMP EXITTT
616 01060 R 002775 A *G      .WRITE SLOT,2,MESS7,34
      CAL+2*1000 SLOT&777
01061 R 000011 A *G      11

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| PAGE | 15 | ASSET | SRC      | LIST                                     |
|------|----|-------|----------|--|
|      |    | 01062 | R 001436 | R *G MESS7                               |
|      |    |       |          | *G .DEC                                  |
| 617  |    | 01063 | R 777736 | A *G -34                                 |
|      |    |       |          | .WAIT SLOT                               |
|      |    | 01064 | R 000775 | A *G CAL SLOT&777                        |
| 618  |    | 01065 | R 000012 | A *G 12                                  |
|      |    |       |          | .WRITE SLOT,2,MESS7A,34                  |
|      |    | 01066 | R 002775 | A *G CAL+2*1000 SLOT&777                 |
|      |    | 01067 | R 000011 | A *G 11                                  |
|      |    | 01070 | R 001450 | R *G MESS7A                              |
|      |    |       |          | *G .DEC                                  |
| 619  |    | 01071 | R 777736 | A *G -34                                 |
|      |    |       |          | .WAIT SLOT                               |
|      |    | 01072 | R 000775 | A *G CAL SLOT&777                        |
|      |    | 01073 | R 000012 | A *G 12                                  |
| 620  |    | 01074 | R 777766 | A LAW -12                                |
| 621  |    | 01075 | R 041541 | R DAC COUNT                              |
| 622  |    | 01076 | R 601027 | R JMP LOOP2                              |
| 623  |    |       |          | /  |
| 624  |    |       |          | /  |
| 625  |    |       |          | /  |
| 626  |    | 01077 | R        | EXITTT .CLOSE SLOT                       |
|      |    | 01077 | R 000775 | A *G CAL SLOT&777                        |
|      |    | 01100 | R 000006 | A *G 6                                   |
| 627  |    | 01101 | R 620563 | R JMP* LIST                              |
| 628  |    |       |          | /  |
| 629  |    |       |          | /  |
| 630  |    |       |          | /  |
| 631  |    | 01102 | R 740040 | A BUFNIT XX /SETS 1ST 30 WORDS IN BUFFER |
| 632  |    | 01103 | R 201616 | R LAC (MESBUF+1 /TO SPACES               |
| 633  |    | 01104 | R 061600 | R DAC* (10                               |
| 634  |    | 01105 | R 777761 | A LAW -17                                |
| 635  |    | 01106 | R 040370 | R DAC CNTR                               |
| 636  |    | 01107 | R 201617 | R LAC (201004 /STORE                     |
| 637  |    | 01110 | R 060010 | A DAC* 10 /FIVE                          |
| 638  |    | 01111 | R 201620 | R LAC (20100                             |
| 639  |    | 01112 | R 060010 | A DAC* 10 /SPACES IN 5*7 ASCII           |
| 640  |    | 01113 | R 440370 | R ISZ CNTR                               |
| 641  |    | 01114 | R 601107 | R JMP .-5                                |
| 642  |    | 01115 | R 141470 | R DZM MESBUF /CLEAR WORD COUNT           |
| 643  |    | 01116 | R 621102 | R JMP* BUFNIT                            |
| 644  |    |       |          | /  |
| 645  |    |       |          | /  |
| 646  |    |       |          | /  |
| 647  |    |       |          | /  |
| 648  |    |       |          | /  |
| 649  |    | 01117 | R 740040 | A OUTPUT XX                              |
| 650  |    | 01120 | R 201470 | R LAC MESBUF                             |
| 651  |    | 01121 | R 341621 | R TAD (MESBUF                            |
| 652  |    | 01122 | R 723003 | A AAC 3                                  |
| 653  |    | 01123 | R 040370 | R DAC CNTR                               |
| 654  |    | 01124 | R 201622 | R LAC (20032                             |

| PAGE | 16 | ASSET | SRC      | LIST                                       |
|------|----|-------|----------|--|
| 655  |    | 01125 | R 060370 | R DAC* CNTR /CARRIAGE RETURN               |
| 656  |    | 01126 | R 201470 | R LAC MESBUF                               |
| 657  |    | 01127 | R 723004 | A AAC 4                                    |
| 658  |    | 01130 | R 660710 | A ALSS 10                                  |
| 659  |    | 01131 | R 723002 | A AAC 2                                    |
| 660  |    | 01132 | R 041470 | R DAC MESBUF                               |
| 661  |    |       |          | .WRITE SLOT,2,MESBUF,30                    |
|      |    | 01133 | R 002775 | A *G CAL+2*1000 SLOT&777                   |
|      |    | 01134 | R 000011 | A *G 11                                    |
|      |    | 01135 | R 001470 | R *G MESBUF                                |
|      |    |       |          | *G .DEC                                    |
|      |    | 01136 | R 777742 | A *G -30                                   |
| 662  |    |       |          | .WAIT SLOT                                 |
|      |    | 01137 | R 000775 | A *G CAL SLOT&777                          |
|      |    | 01140 | R 000012 | A *G 12                                    |
| 663  |    | 01141 | R 101102 | R JMS BUFNIT                               |
| 664  |    | 01142 | R 621117 | R JMP* OUTPUT                              |
| 665  |    |       |          | /  |
| 666  |    |       |          | /  |
| 667  |    |       |          | /  |
| 668  |    |       |          | /  |
| 669  |    |       |          | /  |
| 670  |    | 01143 | R 740040 | A BUFFIL XX                                |
| 671  |    | 01144 | R 652000 | A LMQ                                      |
| 672  |    | 01145 | R 201470 | R LAC MESBUF                               |
| 673  |    | 01146 | R 723002 | A AAC 2                                    |
| 674  |    | 01147 | R 041470 | R DAC MESBUF                               |
| 675  |    | 01150 | R 341621 | R TAD (MESBUF                              |
| 676  |    | 01151 | R 041562 | R DAC SCAN1#                               |
| 677  |    | 01152 | R 740030 | A IAC                                      |
| 678  |    | 01153 | R 041563 | R DAC SCAN2#                               |
| 679  |    | 01154 | R 141550 | R DZM FLAG#                                |
| 680  |    | 01155 | R 641002 | A LUUP LACQ                                |
| 681  |    | 01156 | R 740200 | A SZA                                      |
| 682  |    | 01157 | R 601166 | R JMP NON0                                 |
| 683  |    | 01160 | R 201550 | R LAC FLAG                                 |
| 684  |    | 01161 | R 740200 | A SZA                                      |
| 685  |    | 01162 | R 621143 | R JMP* BUFFIL /SOMETHING ALREADY IN BUFFER |
| 686  |    | 01163 | R 723060 | A AAC 60                                   |
| 687  |    | 01164 | R 101175 | R JMS PACK                                 |
| 688  |    | 01165 | R 621143 | R JMP* BUFFIL                              |
| 689  |    |       |          | /  |
| 690  |    |       |          | /  |
| 691  |    | 01166 | R 441550 | R NON0 ISZ FLAG                            |
| 692  |    | 01167 | R 754000 | A CLL!CLA                                  |
| 693  |    | 01170 | R 640323 | A DIV                                      |
| 694  |    | 01171 | R 000012 | A 12                                       |
| 695  |    | 01172 | R 723060 | A AAC 60                                   |
| 696  |    | 01173 | R 101175 | R JMS PACK                                 |
| 697  |    | 01174 | R 601155 | R JMP LUUP                                 |
| 698  |    |       |          | /  |
| 699  |    |       |          | /  |



| PAGE | 17 | ASSET | SRC        | LIST   |
|------|----|-------|------------|--|
| 700  |    |       |            | /  |
| 701  |    |       |            | /  |
| 702  |    | 01175 | R 740040 A | PACK XX  |
| 703  |    | 01176 | R 660713 A | ALSS 13  |
| 704  |    | 01177 | R 040370 R | DAC CNTR   |
| 705  |    | 01200 | R 641002 A | LACQ   |
| 706  |    | 01201 | R 041560 R | DAC SAVE#  |
| 707  |    | 01202 | R 221563 R | LAC* SCAN2   |
| 708  |    | 01203 | R 652000 A | LMQ  |
| 709  |    | 01204 | R 221562 R | LAC* SCAN1   |
| 710  |    | 01205 | R 744000 A | CLL  |
| 711  |    | 01206 | R 640507 A | LRS 7  |
| 712  |    | 01207 | R 340370 R | TAD CNTR   |
| 713  |    | 01210 | R 061562 R | DAC* SCAN1   |
| 714  |    | 01211 | R 641002 A | LACQ   |
| 715  |    | 01212 | R 061563 R | DAC* SCAN2   |
| 716  |    | 01213 | R 201560 R | BACKL LAC SAVE                                     |
| 717  |    | 01214 | R 652000 A | LMQ  |
| 718  |    | 01215 | R 621175 R | JMP* PACK  |
| 719  |    |       |            | /  |
| 720  |    |       |            | / SUBROUTINE SPRATE                                |
| 721  |    |       |            | / SEPARATES A PACKED UP WORD IN TRACKS             |
| 722  |    |       |            | / OR PADS ARRAY.                                   |
| 723  |    |       |            | / ADDRESS OF WORD HELD IN TEMP                     |
| 724  |    |       |            | /  |
| 725  |    | 01216 | R 740040 A | SPRATE XX  |
| 726  |    | 01217 | R 221573 R | LAC* TEMP  |
| 727  |    | 01220 | R 652000 A | LMQ  |
| 728  |    | 01221 | R 750000 A | CLA  |
| 729  |    | 01222 | R 640605 A | LLS 5  |
| 730  |    | 01223 | R 041555 R | DAC PTR#   |
| 731  |    | 01224 | R 750000 A | CLA  |
| 732  |    | 01225 | R 640604 A | LLS 4  |
| 733  |    | 01226 | R 041552 R | DAC LAYR#  |
| 734  |    | 01227 | R 201567 R | LAC SPFLG  |
| 735  |    | 01230 | R 750200 A | SZA!CLA /NOT SPACE                                 |
| 736  |    | 01231 | R 601234 R | JMP .+3  |
| 737  |    | 01232 | R 640611 A | LLS 11   |
| 738  |    | 01233 | R 741000 A | SKP  |
| 739  |    | 01234 | R 640610 A | LLS 10 /DIVIDE SPACE BY 2                          |
| 740  |    | 01235 | R 041574 R | DAC WIDTH#   |
| 741  |    | 01236 | R 621216 R | JMP* SPRATE  |
| 742  |    |       |            | /  |
| 743  |    |       |            | / SUBROUTINE SETWRT                                |
| 744  |    |       |            | / USED TO SCAN TRACKS ARRAY FOR NEXT WORD IN CHAIN |
| 745  |    |       |            | /  |
| 746  |    | 01237 | R 740040 A | SETWRT XX  |
| 747  |    | 01240 | R 201555 R | COPOUT LAC PTR                                     |
| 748  |    | 01241 | R 741200 A | SNA  |
| 749  |    | 01242 | R 621237 R | JMP* SETWRT  |
| 750  |    | 01243 | R 201565 R | LAC SETAD  |
| 751  |    | 01244 | R 341555 R | TAD PTR  |

| PAGE | 18 | ASSET | SRC      | LIST                             |
|------|----|-------|----------|----------------------------------|
| 752  |    | 01245 | R 041573 | R DAC TEMP#                      |
| 753  |    | 01246 | R 101216 | R JMS SPRATE                     |
| 754  |    | 01247 | R 201470 | R LAC MESBUF                     |
| 755  |    | 01250 | R 723004 | A AAC 4                          |
| 756  |    | 01251 | R 041470 | R DAC MESBUF                     |
| 757  |    | 01252 | R 201552 | R LAC LAYR                       |
| 758  |    | 01253 | R 101143 | R JMS BUFFIL                     |
| 759  |    | 01254 | R 201574 | R LAC WIDTH                      |
| 760  |    | 01255 | R 101143 | R JMS BUFFIL                     |
| 761  |    | 01256 | R 101117 | R JMS OUTPUT                     |
| 762  |    | 01257 | R 601240 | R JMP COPOUT                     |
| 763  |    |       |          | /                                |
| 764  |    | 01260 | R 002002 | A MESS1 2002: 0                  |
|      |    | 01261 | R 000000 | A                                |
| 765  |    | 01262 | R 202032 | A .ASCII / ASSIGNMENT TABLE<<15> |
|      |    | 01263 | R 351622 | A                                |
|      |    | 01264 | R 436351 | A                                |
|      |    | 01265 | R 542634 | A                                |
|      |    | 01266 | R 521012 | A                                |
|      |    | 01267 | R 440604 | A                                |
|      |    | 01270 | R 462121 | A                                |
|      |    | 01271 | R 500000 | A                                |
| 766  |    | 01272 | R 002002 | A MESS2 2002: 0                  |
|      |    | 01273 | R 000000 | A                                |
| 767  |    | 01274 | R 201010 | A .ASCII / COPPER SPOT<<15>      |
|      |    | 01275 | R 347640 | A                                |
|      |    | 01276 | R 502132 | A                                |
|      |    | 01277 | R 220246 | A                                |
|      |    | 01300 | R 502372 | A                                |
|      |    | 01301 | R 406400 | A                                |
| 768  |    | 01302 | R 002002 | A MESS2A 2002: 0                 |
|      |    | 01303 | R 000000 | A                                |
| 769  |    | 01304 | R 201004 | A .ASCII / LAYER DIAM<<15>       |
|      |    | 01305 | R 020100 | A                                |
|      |    | 01306 | R 201004 | A                                |
|      |    | 01307 | R 020230 | A                                |
|      |    | 01310 | R 406630 | A                                |
|      |    | 01311 | R 551100 | A                                |
|      |    | 01312 | R 422230 | A                                |
|      |    | 01313 | R 146432 | A                                |
| 770  |    | 01314 | R 002002 | A MESS3 2002: 0                  |
|      |    | 01315 | R 000000 | A                                |
| 771  |    | 01316 | R 201012 | A .ASCII / SPACES<<15>           |
|      |    | 01317 | R 350202 | A                                |
|      |    | 01320 | R 416132 | A                                |
|      |    | 01321 | R 306400 | A                                |
| 772  |    | 01322 | R 002002 | A MESS3A 2002: 0                 |
|      |    | 01323 | R 000000 | A                                |
| 773  |    | 01324 | R 201004 | A .ASCII / LAYER SPACE<<15>      |
|      |    | 01325 | R 020100 | A                                |
|      |    | 01326 | R 201004 | A                                |
|      |    | 01327 | R 020230 | A                                |

| PAGE | 19 | ASSET | SRC      | LIST                                |
|------|----|-------|----------|-------------------------------------|
|      |    | 01330 | R 406630 | A                                   |
|      |    | 01331 | R 551100 | A                                   |
|      |    | 01332 | R 516410 | A                                   |
|      |    | 01333 | R 141612 | A                                   |
|      |    | 01334 | R 064000 | A                                   |
|      |    | 01335 | R 000000 | A                                   |
| 774  |    | 01336 | R 002002 | A MESS4 2002: 0                     |
|      |    | 01337 | R 000000 | A                                   |
| 775  |    | 01340 | R 201012 | A .ASCII / PLATED THROUGH HOLE<<15> |
|      |    | 01341 | R 046202 | A                                   |
|      |    | 01342 | R 522130 | A                                   |
|      |    | 01343 | R 420250 | A                                   |
|      |    | 01344 | R 442451 | A                                   |
|      |    | 01345 | R 752616 | A                                   |
|      |    | 01346 | R 441011 | A                                   |
|      |    | 01347 | R 047630 | A                                   |
|      |    | 01350 | R 424320 | A                                   |
|      |    | 01351 | R 000000 | A                                   |
| 776  |    | 01352 | R 002002 | A MESS4A 2002: 0                    |
|      |    | 01353 | R 000000 | A                                   |
| 777  |    | 01354 | R 201004 | A .ASCII / LAYER DIAM DRILL<<15>    |
|      |    | 01355 | R 020100 | A                                   |
|      |    | 01356 | R 201004 | A                                   |
|      |    | 01357 | R 020230 | A                                   |
|      |    | 01360 | R 406630 | A                                   |
|      |    | 01361 | R 551100 | A                                   |
|      |    | 01362 | R 422230 | A                                   |
|      |    | 01363 | R 146500 | A                                   |
|      |    | 01364 | R 422451 | A                                   |
|      |    | 01365 | R 146230 | A                                   |
|      |    | 01366 | R 064000 | A                                   |
|      |    | 01367 | R 000000 | A                                   |
| 778  |    | 01370 | R 002002 | A MESS5 2002: 0                     |
|      |    | 01371 | R 000000 | A                                   |
| 779  |    | 01372 | R 201012 | A .ASCII / TRACKS<<15>              |
|      |    | 01373 | R 451202 | A                                   |
|      |    | 01374 | R 416272 | A                                   |
|      |    | 01375 | R 306400 | A                                   |
| 780  |    | 01376 | R 002002 | A MESS5A 2002: 0                    |
|      |    | 01377 | R 000000 | A                                   |
| 781  |    | 01400 | R 201004 | A .ASCII / CODE LAYER WIDTH<<15>    |
|      |    | 01401 | R 020206 | A                                   |
|      |    | 01402 | R 476110 | A                                   |
|      |    | 01403 | R 520230 | A                                   |
|      |    | 01404 | R 406630 | A                                   |
|      |    | 01405 | R 551100 | A                                   |
|      |    | 01406 | R 536230 | A                                   |
|      |    | 01407 | R 452220 | A                                   |
|      |    | 01410 | R 064000 | A                                   |
|      |    | 01411 | R 000000 | A                                   |
| 782  |    | 01412 | R 002002 | A MESS6 2002: 0                     |
|      |    | 01413 | R 000000 | A                                   |

| PAGE | 20 | ASSET   | SRC      | LIST                                |
|------|----|---------|----------|-------------------------------------|
| 783  |    | 01414 R | 201012 A | .ASCII / PADS/<15>                  |
|      |    | 01415 R | 040610 A |                                     |
|      |    | 01416 R | 514320 A |                                     |
|      |    | 01417 R | 000000 A |                                     |
| 784  |    | 01420 R | 002002 A | MESS6A 2002: 0                      |
|      |    | 01421 R | 000000 A |                                     |
| 785  |    | 01422 R | 201004 A | .ASCII / CODE LAYER DIAM DRILL/<15> |
|      |    | 01423 R | 020206 A |                                     |
|      |    | 01424 R | 476110 A |                                     |
|      |    | 01425 R | 520230 A |                                     |
|      |    | 01426 R | 406630 A |                                     |
|      |    | 01427 R | 551100 A |                                     |
|      |    | 01430 R | 422230 A |                                     |
|      |    | 01431 R | 146500 A |                                     |
|      |    | 01432 R | 422451 A |                                     |
|      |    | 01433 R | 146230 A |                                     |
|      |    | 01434 R | 064000 A |                                     |
|      |    | 01435 R | 000000 A |                                     |
| 786  |    | 01436 R | 002002 A | MESS7 2002: 0                       |
|      |    | 01437 R | 000000 A |                                     |
| 787  |    | 01440 R | 201010 A | .ASCII / EDGE CONNECTORS/<15>       |
|      |    | 01441 R | 542216 A |                                     |
|      |    | 01442 R | 425010 A |                                     |
|      |    | 01443 R | 347634 A |                                     |
|      |    | 01444 R | 472130 A |                                     |
|      |    | 01445 R | 352236 A |                                     |
|      |    | 01446 R | 512461 A |                                     |
|      |    | 01447 R | 500000 A |                                     |
| 788  |    | 01450 R | 002002 A | MESS7A 2002: 0                      |
|      |    | 01451 R | 000000 A |                                     |
| 789  |    | 01452 R | 201004 A | .ASCII / CODE LAYER MOVEMENT/<15>   |
|      |    | 01453 R | 020206 A |                                     |
|      |    | 01454 R | 476110 A |                                     |
|      |    | 01455 R | 520230 A |                                     |
|      |    | 01456 R | 406630 A |                                     |
|      |    | 01457 R | 551100 A |                                     |
|      |    | 01460 R | 466372 A |                                     |
|      |    | 01461 R | 642632 A |                                     |
|      |    | 01462 R | 426352 A |                                     |
|      |    | 01463 R | 406400 A |                                     |
| 790  |    | 01464 R | 002002 A | MESS7B 2002: 0                      |
|      |    | 01465 R | 000000 A |                                     |
| 791  |    | 01466 R | 200320 A | .ASCII / <15>                       |
|      |    | 01467 R | 000000 A |                                     |
| 792  |    | 01470 R |          | MESBUF .BLOCK 50                    |
| 793  |    |         | 000000 A | .END                                |
|      |    | 01575 R | 001575 E | *E                                  |
|      |    | 01576 R | 001576 E | *E                                  |
|      |    | 01577 R | 000373 R | *L                                  |
|      |    | 01600 R | 000010 A | *L                                  |
|      |    | 01601 R | 000777 A | *L                                  |
|      |    | 01602 R | 000037 A | *L                                  |

01603 R 017000 A \*L  
01604 R 760000 A \*L  
01605 R 000017 A \*L  
01606 R 017777 A \*L  
01607 R 777000 A \*L  
01610 R 000021 A \*L  
01611 R 377777 A \*L  
01612 R 400000 A \*L  
01613 R 000004 A \*L  
01614 R 000003 A \*L  
01615 R-000011-A \*L  
01616 R 001471 R \*L  
01617 R 201004 A \*L  
01620 R 020100 A \*L  
01621 R 001470 R \*L  
01622 R 020032 A \*L

SIZE=01624      NO ERROR LINES

| ADDR   | 00371 | 98   | 107  | 113  | 118  | 134 | 138  | 139 | 147 |
|--------|-------|------|------|------|------|-----|------|-----|-----|
|        |       | 154  | 158  | 178  | 180  | 186 | 191  | 198 | 213 |
|        |       | 215  | 222  | 223  | 231  | 237 | 249  | 250 | 256 |
|        |       | 262  | 265  | 321* |      |     |      |     |     |
| ADDTRK | 00107 | 120  | 127* |      |      |     |      |     |     |
| ALAYS  | 00160 | 178* | 209  |      |      |     |      |     |     |
| ALLAY  | 00155 | 102  | 175* |      |      |     |      |     |     |
| ARAD   | 01540 | 96   | 121  | 133  | 143  | 155 | 196  | 220 |     |
| ASSET  | 00007 | 48   | 56*  | 88   | 278  | 287 | 303  |     |     |
| BACKL  | 01213 | 716* |      |      |      |     |      |     |     |
| BUFFIL | 01143 | 491  | 513  | 534  | 536  | 559 | 565  | 594 | 599 |
|        |       | 601  | 670* | 685  | 688  | 758 | 760  |     |     |
| BUFNIT | 01102 | 483  | 631* | 643  | 663  |     |      |     |     |
| CHADRL | 00211 | 177  | 204* |      |      |     |      |     |     |
| CNTR   | 00370 | 313  | 316  | 320* | 635  | 640 | 653  | 655 | 704 |
|        |       | 712  |      |      |      |     |      |     |     |
| CODE   | 00012 | 59*  | 97   | 205  | 266  |     |      |     |     |
| COPOUT | 01240 | 747* | 762  |      |      |     |      |     |     |
| COPY   | 00352 | 79   | 82   | 85   | 306* | 307 | 310  | 311 | 318 |
|        |       | 319  |      |      |      |     |      |     |     |
| COUNT  | 01541 | 550  | 571  | 581  | 611  | 621 |      |     |     |
| COUNT1 | 01542 | 583  | 614  |      |      |     |      |     |     |
| DAT    | 01543 | 455  | 459  | 465  |      |     |      |     |     |
| DATAD  | 01575 | 448  | 453  |      |      |     |      |     |     |
| DAT1   | 01544 | 463  | 464  |      |      |     |      |     |     |
| DELETE | 00260 | 240  | 246* |      |      |     |      |     |     |
| DFLT   | 01545 | 99   | 127  |      |      |     |      |     |     |
| DPTR   | 01546 | 206  | 208  |      |      |     |      |     |     |
| DRILAD | 00562 | 53   | 451* | 451  | 527  | 584 |      |     |     |
| DRILL  | 00004 | 53*  | 86   | 204  |      |     |      |     |     |
| DRL    | 00516 | 408* |      |      |      |     |      |     |     |
| ENDRT  | 01547 | 283  | 286  |      |      |     |      |     |     |
| EORAD  | 00001 | 50*  | 282  |      |      |     |      |     |     |
| ERRA   | 00347 | 106  | 301* |      |      |     |      |     |     |
| ERRB   | 00345 | 146  | 299* |      |      |     |      |     |     |
| EXIT   | 00304 | 163  | 202  | 219  | 227  | 248 | 266* |     |     |
| EXITTT | 01077 | 615  | 626* |      |      |     |      |     |     |
| FINISH | 00206 | 194  | 200* |      |      |     |      |     |     |
| FLAG   | 01550 | 679  | 683  | 691  |      |     |      |     |     |
| INVAL  | 01551 | 73   | 131  | 185  | 236  | 261 | 270  | 275 | 276 |
| LAYER  | 00016 | 55   | 63*  | 100  | 150  | 228 | 253  |     |     |
| LAYR   | 01552 | 733  | 757  |      |      |     |      |     |     |
| LIST   | 00563 | 447  | 448  | 452* | 627  |     |      |     |     |
| LOOP   | 00362 | 314* | 317  |      |      |     |      |     |     |
| LOOP1  | 00754 | 552* | 572  |      |      |     |      |     |     |
| LOOP2  | 01027 | 590* | 612  | 622  |      |     |      |     |     |
| LUUP   | 01155 | 680* | 697  |      |      |     |      |     |     |
| MESBUF | 01470 | 484  | 486  | 503  | 505  | 524 | 526  | 556 | 557 |
|        |       | 560  | 561  | 591  | 592  | 595 | 596  | 632 | 642 |
|        |       | 650  | 651  | 656  | 660  | 661 | 672  | 674 | 675 |
|        |       | 754  | 756  | 792* |      |     |      |     |     |
| MESS1  | 01260 | 471  | 764* |      |      |     |      |     |     |
| MESS2  | 01272 | 479  | 766* |      |      |     |      |     |     |

|        |        |      |      |      |     |     |      |     |     |
|--------|--------|------|------|------|-----|-----|------|-----|-----|
| MESS2A | 01302  | 481  | 768* |      |     |     |      |     |     |
| MESS3  | 01314  | 506  | 770* |      |     |     |      |     |     |
| MESS3A | 01322  | 508  | 772* |      |     |     |      |     |     |
| MESS4  | 01336  | 520  | 774* |      |     |     |      |     |     |
| MESS4A | 01352  | 522  | 776* |      |     |     |      |     |     |
| MESS5  | 01370  | 545  | 778* |      |     |     |      |     |     |
| MESS5A | 01376  | 547  | 780* |      |     |     |      |     |     |
| MESS6  | 01412  | 576  | 782* |      |     |     |      |     |     |
| MESS6A | 01420  | 578  | 784* |      |     |     |      |     |     |
| MESS7  | 01436  | 616  | 786* |      |     |     |      |     |     |
| MESS7A | 01450  | 618  | 788* |      |     |     |      |     |     |
| MESS7B | 01464  | 473  | 790* |      |     |     |      |     |     |
| MODE   | 00015  | 62*  | 74   | 175  | 269 | 302 |      |     |     |
| NON0   | 01166  | 682  | 691* |      |     |     |      |     |     |
| NOSET  | 00050  | 76   | 89*  |      |     |     |      |     |     |
| NOSLAY | 00006  | 55*  | 104  |      |     |     |      |     |     |
| NUMB   | 01553  | 92   | 122  | 132  | 141 | 142 | 156  | 168 | 195 |
|        |        | 221  |      |      |     |     |      |     |     |
| NUMBA  | 01554  | 551  | 552  | 554  | 558 | 589 | 590  | 593 | 609 |
| NUMBP  | 00557  | 167  | 444* |      |     |     |      |     |     |
| NUMBT  | 00556  | 91   | 443* |      |     |     |      |     |     |
| NXTONE | 00162  | 180* | 199  |      |     |     |      |     |     |
| ONE    | 00373  | 295  | 323* |      |     |     |      |     |     |
| OUTPUT | 01117  | 492  | 514  | 537  | 566 | 602 | 649* | 664 | 761 |
| PACK   | 01175  | 687  | 696  | 702* | 718 |     |      |     |     |
| PADAD  | 00561  | 52   | 450* | 450  | 530 | 538 | 586  | 603 | 607 |
| PADAS  | 00151  | 90   | 167* |      |     |     |      |     |     |
| PADS   | 00003  | 52*  | 83   | 169  |     |     |      |     |     |
| PDS    | 00416  | 344* |      |      |     |     |      |     |     |
| PTR    | 01555  | 730  | 747  | 751  |     |     |      |     |     |
| ROOTLP | 00327  | 285* | 298  |      |     |     |      |     |     |
| ROUTAD | 01556  | 72   | 279  |      |     |     |      |     |     |
| ROUTE  | 00000  | 49*  | 49   | 71   |     |     |      |     |     |
| RTPT   | 01557  | 280  | 285  | 288  | 294 |     |      |     |     |
| SAVE   | 01560  | 706  | 716  |      |     |     |      |     |     |
| SAVPTR | 01561  | 241  | 244  |      |     |     |      |     |     |
| SCAN   | 00117  | 138* | 149  |      |     |     |      |     |     |
| SCAN1  | 01562  | 676  | 709  | 713  |     |     |      |     |     |
| SCAN2  | 01563  | 678  | 707  | 715  |     |     |      |     |     |
| SDRL   | 01564  | 70   | 87   |      |     |     |      |     |     |
| SETAD  | 01565  | 495  | 540  | 569  | 605 | 750 |      |     |     |
| SETST  | 00321  | 279* |      |      |     |     |      |     |     |
| SETWRT | 01237  | 496  | 515  | 541  | 570 | 606 | 746* | 749 |     |
| SIZE   | 00005  | 54*  | 54   | 64   |     |     |      |     |     |
| SLOT   | 777775 | 456  | 461  | 467  | 471 | 472 | 473  | 474 | 479 |
|        |        | 480  | 481  | 482  | 506 | 507 | 508  | 509 | 520 |
|        |        | 521  | 522  | 523  | 545 | 546 | 547  | 548 | 576 |
|        |        | 577  | 578  | 579  | 616 | 617 | 618  | 619 | 626 |
|        |        | 661  | 662  |      |     |     |      |     |     |
| SPAD   | 01566  | 68   | 84   |      |     |     |      |     |     |
| SPFLG  | 01567  | 477  | 510  | 516  | 734 |     |      |     |     |
| SPRATE | 01216  | 489  | 511  | 532  | 563 | 597 | 725* | 741 | 753 |
| STAND  | 00217  | 110  | 213* | 230  |     |     |      |     |     |

PAGE 24 ASSET CROSS REFERENCE

|        |       |      |      |      |     |     |     |     |     |
|--------|-------|------|------|------|-----|-----|-----|-----|-----|
| STORPT | 01570 | 119  | 161  | 162  | 189 | 192 | 197 |     |     |
| STPAD  | 01571 | 179  | 201  | 214  | 242 | 247 |     |     |     |
| STRK   | 01572 | 66   | 81   |      |     |     |     |     |     |
| TEMP   | 01573 | 488  | 502  | 531  | 555 | 562 | 588 | 610 | 726 |
|        |       | 752  |      |      |     |     |     |     |     |
| TEST   | 00263 | 123  | 249* |      |     |     |     |     |     |
| TRAKA  | 00055 | 96*  | 170  |      |     |     |     |     |     |
| TRK    | 00374 | 77   | 326* |      |     |     |     |     |     |
| TRKAD  | 00560 | 449* | 487  | 493  | 500 | 553 | 567 |     |     |
| TRKD   | 00002 | 51*  | 80   | 95   |     |     |     |     |     |
| TRKLUP | 00074 | 113* | 255  |      |     |     |     |     |     |
| TSTMOR | 00104 | 117  | 121* |      |     |     |     |     |     |
| WIDTH  | 01574 | 490  | 512  | 533  | 564 | 598 | 740 | 759 |     |
| WSID1  | 00013 | 60*  | 109  | 129  | 153 | 183 | 200 | 234 | 259 |
|        |       | 264  |      |      |     |     |     |     |     |
| WSID2  | 00014 | 61*  | 207  |      |     |     |     |     |     |
| ZERO   | 00372 | 290  | 293  | 322* |     |     |     |     |     |
| .DA    | 01576 | 48   | 57   |      |     |     |     |     |     |